

CLAIMS:

What is claimed is:

1. A humanized antibody that binds to human 4-1BB and that allows binding of human 4-1BB to a human 4-1BB ligand.

5 2. The antibody of claim 1 that comprises a light chain and a heavy chain, wherein:

 said heavy chain includes a CDR1 comprising amino acids 50 to 54 of SEQ ID NO:5, a CDR2 comprising amino acids 69 to 85 of SEQ ID NO:5, and a CDR3 comprising amino acids 118 to 122 of SEQ ID NO:5; and

10 said light chain includes a CDR1 comprising amino acids 44 to 60 of SEQ ID NO:8, a CDR2 comprising amino acids 76 to 82 of SEQ ID NO:8, and a CDR3 comprising amino acids 115 to 123 of SEQ ID NO:8.

 3. The humanized antibody of claim 2 that is an IgG4 antibody.

 4. The antibody of claim 1 that comprises the amino acid sequence of SEQ ID
15 NO:5 and SEQ ID NO:8.

 5. A pharmaceutical composition comprising the antibody of claim 1 and a pharmaceutically acceptable carrier.

 6. A method for treating cancer in a subject comprising administering a therapeutically effective amount of the antibody of claim 1 to said subject.

20 7. An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of:

 (a) nucleotides 693 to 2072 of SEQ ID NO:3; and

 (b) nucleotides 633 to 1034 and 1409 to 1726 of SEQ ID NO:6.

 8. The polynucleotide of claim 7 that comprises the nucleotide sequence of
25 SEQ ID NO:3.

 9. The polynucleotide of claim 7 that comprises the nucleotide sequence of SEQ ID NO:6.